

shown in FIGURE 3, to an extended rotating position with the connector 12 disposed in a female mode, such as that shown for the left side connector 12 in FIGURE 1.

IN THE CLAIMS:

1. (Amended) A multi-channel fiber optic cable connector for connecting the terminal ends of two multi-channel fiber optic cables having termini of respective ones of multiple optical fibers included within said cables, the connector comprising:

5 a first housing having a first connector face, a first insert cap tower with and two first [insert cap] tangs which extend forward of said first connector face, wherein said two first tangs and said first insert cap tower are spaced apart to extend forward of said first connector face in a keyed arrangement for reciprocally engaging a second housing having a second insert cap tower with two second tangs, said two first tangs fitting adjacent to the second insert cap tower, said first insert cap tower fitting
10 adjacent to the second insert cap tower and the second tangs, and said first connector face fitting against a second forward surface of the second insert cap tower;

said first insert cap tower having two interior passages which define first [plug body] insert cap tower cavities within which are disposed respective ones of a first pair of said termini; and

15 said first connector face having a pair of interior passages which define two first connector face cavities which are disposed between said first insert cap tower and said two first tangs, from which respective ones of a second pair of said termini extend.

2. (Amended) The multi-channel fiber optic cable connector of Claim 1, wherein said two first insert cap tower cavities are aligned with two second connector face cavities of the second connector face for receiving respective ones of a third pair of two of said termini therebetween, and said first connector face cavities are aligned

5 with two second insert cap tower cavities of the second insert cap [cavities] tower for receiving a fourth respective pair of said termini therebetween.

3. (Amended) The multi-channel fiber optic cable connector of Claim 2, wherein said first insert cap tower, said first connector face and said two first tangs are identically arranged to the second insert cap tower, the second connector face and the second tangs to provide a hermaphroditic fiber optic cable connector.

7. (Amended) A multi-channel fiber optic cable connector for connecting the terminal ends of two multi-channel fiber optic cables having termini of respective ones of multiple optical fibers included within said cables, the connector comprising:

5 a housing having an insert body with a plurality of interior passages disposed therein for receiving respective ones of the termini of the optical fibers of one of said cables;

at least one mating plane for aligning with a second at least one mating plane of a second housing for transmitting light signals therebetween;

10 a plurality of shoulders disposed to extend substantially transverse to the longitudinal axes of said passages for retaining said termini within said passages;

a plurality of inwardly extending protuberances which extend inwardly within respective ones of said interior passages, each of said interior passages having one of said shoulders and one of said protuberances, and wherein said shoulders are spaced apart from respective ones of said protuberances and said mating plane, and said
15 protuberances are distally disposed from said mating plane;

said protuberances fitting around respective ones of said termini, to gimbal said termini within respective ones of said interior passages, wherein said terminal ends of said termini may angularly move transverse to respective ones of said longitudinal axes thereof, pivoting about said protuberances;

20 a plurality of floating collars, each of which extends around a respective one of said termini with a clearance fit between said respective ones of said floating

collars and said termini such that said floating collars are free to move parallel to longitudinal axes of said respective termini;

25 first seal elements disposed within respective ones of first seal glands, and sealingly engaging between said respective termini and said floating collars;

said floating collars having seal faces which extend parallel to said longitudinal axes of said respective termini, spaced apart from respective ones of said interior passages of said housing to define second seal glands therebetween;

30 second seal elements disposed in said second seal glands, extending around respective ones of said longitudinal axes of said respective termini, and sealingly engaging between respective ones of said seal faces and said interior passages when said termini are angularly displaced about said protuberances;

biasing means to [engergize] energize said second seal elements;

35 continuous ceramic sleeves having interior bores which are of a slightly wider cross-section than said termini, providing clearance fits between said continuous ceramic sleeves and said termini over lengths which extend parallel to respective ones of said longitudinal axes of said termini; and

40 wherein mating ones of said termini fit within opposite ends of respective ones of said continuous ceramic sleeves to align said terminal ends of said mating ones of said termini for transmitting light signals therebetween.